

### Patent claims

1. A system for lubricating a closing mechanism on fifth wheels comprising: a closing mechanism arranged on the bottom side of a coupling plate, having at least one closing hook or closing bar or a combination thereof provided with a coating, and a grease reservoir, which is connected by a lubricating line to the closing hook, wherein the coating of the closing hook or closing bar or both is configured as a sliding coating and the grease reservoir is a grease cartridge, with the grease cartridge arranged on the fifth wheel.

2. The system per claim 1, wherein the grease cartridge is coordinated with the fifth wheel.

3. The system per claim 1, wherein the grease cartridge is arranged underneath the coupling plate.

4. The system per claim 1, wherein the grease cartridge has a drive unit.

5. The system per claim 4, wherein the drive unit comprises an electromechanical drive.

6. The system per claim 4, wherein the drive unit comprises a chemical drive.

7. The system per claim 4, wherein the drive unit is connected to a variable control mechanism.

8. The system per claim 7, wherein the variable control mechanism comprises an engine control mechanism.

9. The system per claim 7, wherein the variable control mechanism comprises a valve control mechanism.

10. The system per claim 9, wherein the valve control mechanism comprises a flow restriction valve arranged in the lubricating line.

11. The system per claim 7, wherein the variable control mechanism communicates with a vehicle control unit.

12. The system per claim 7, wherein the variable control mechanism communicates with a coupling control unit.

13. The system per claim 7, wherein the variable control mechanism communicates with a pressure sensor arranged on the coupling plate.

14. The system per claim 1, including the closing hook for use in a fifth wheel, wherein at least one outer surface is provided with a coating, wherein the coating is in the form of a sliding coating.

15. The system per claim 14, wherein the sliding coating consists of a multilayer system.

16. The system per claim 15, wherein the multilayer system is preferably composed of at least a first layer, which comprises an iron alloy with nickel and molybdenum fractions, and a second layer of PTFE, applied to the first layer.

17. The system per claim 14, wherein the sliding coating has a layer thickness of 50 to 150 $\mu\text{m}$ .

18. The system per claim 17, wherein the sliding coating has a layer thickness of 70 to 130  $\mu\text{m}$ .

19. The system per claim 1, including the closing bar for use in a fifth wheel, wherein at least one outer surface is provided with a coating, wherein the coating is in the form of a sliding coating.

20. The system per claim 2, wherein the grease cartridge is arranged underneath the coupling plate and has a drive unit that comprises an electromechanical drive or a chemical drive, wherein the drive unit is connected to a variable control mechanism that comprises an engine control mechanism, a valve control mechanism, or a flow restriction valve arranged in the lubricating line, wherein the variable control mechanism communicates with a control unit, or a with a pressure sensor arranged on the coupling plate.